REMARKS

Claims 1-20 are all the claims presently pending in the application. Claims 1, 3-4 6, and 8-9 are amended to more clearly define the invention and claims 10-20 are added. Claims 1 and 10 are independent.

These amendments are made only to more particularly point out the invention for the Examiner and not for narrowing the scope of the claims or for any reason related to a statutory requirement for patentability.

Applicants also note that, notwithstanding any claim amendments herein or later during prosecution, Applicants' intent is to encompass equivalents of all claim elements.

Claims 1-9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Rauchhaus reference in view of the Kussman et al. reference.

This rejection is respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

In a first exemplary embodiment of the claimed invention, as defined by, for example, independent claim 1, is directed to a lock apparatus for attaching a container member to a support member openably. The lock apparatus includes an operation handle, a pair of springs, which are movably supported by the container member, a pair of slide pins, which are urged in directions of lock holes defined on the support member by the springs, respectively, and a pair of cam members to which rear end portions of the slide pins are fitted, respectively, to urge each slide pin to project and retract. Further, when the operation handle is operated in a swing manner, a front end portion of each slide pin is retracted from each lock hole of the support member against pressure of each spring. Additionally, engagement holes

are defined on opposed surfaces of each front end portion of the cam member having a cylindrical portion, each rear end portion of the slide pin is formed in a bifurcated structure including elastic pieces, and each of the elastic pieces includes a protrusion for detachably engaging with each of the engagement holes.

In a second exemplary embodiment of the claimed invention, as defined by, for example, independent claim 10, is directed to a lock that includes a pair of cams that each include a pair of engaging holes, a pair of slide pins each including a bifurcated structure having elastic pieces that each include projections that each engage a corresponding one of the pair of engaging holes.

Conventional locks include link levers that are fixed to corresponding slide pins. Thus, when a glove box that incorporates such conventional lock is damaged, the slide pins cannot be easily removed from the link levers and it becomes impossible to reuse the slide pin.

Further, because it is impossible to remove the slide pins from the link levers, it becomes impossible to detach a housing containing the link lever and an operation handle from the glove box and it is, therefore, impossible to reused the housing and operation handle.

Additionally, if a cylinder lock is provided at the housing, then it also becomes impossible to reuse the cylinder lock unless the housing is destroyed.

In stark contrast to these conventional locks, the present invention provides a lock that includes a pair of springs as recited by independent claim 1 and a pair of cams that each have a pair of engaging holes and a pair of slide pins that each have a bifurcated structure including elastic pieces that each have projections that each engage a corresponding one of the pair of

engaging holes as recited by independent claim 10.

In this manner, when a glove box is destroyed the slide pin may be easily disengaged from the cam, for example, by merely rotating them relative to each other. Thereby allowing the slide pin, cam member, etc., to be reused and maintenance is significantly improved. (Page 8, lines 15-25).

II. THE PRIOR ART REJECTION

The Examiner alleges that the Kussman et al. reference would have been combined with the Rauchhaus reference to form the claimed invention. Applicants submit, however, that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention.

Applicants submit that these references would not have been combined as alleged by the Examiner. Indeed, the references are directed to completely different matters and problems.

Specifically, the Rauchhaus reference is directed to the creating a latch mechanism for a glove box which is simple in design and can be used universally. (Col. 1, lines 48-52).

In stark contrast, the Kussman et al. reference is directed to the completely different and unrelated problem of providing a "specialized connection to a square bore output element . . [that] . . can handle both torque and axial loads from the jackscrew" . . . and that can easily attach the jackscrew to the output element and allow for easy disconnection and repair. (col. 2, lines 12-24).

One of ordinary skill in the art who was concerned with providing a latch mechanism for a glove box that is simple in design as the Rauchhaus reference is concerned with

providing would not have referred to the Kussman et al. reference because the Kussman et al. reference is directed to the completely different and unrelated problem of providing a specialized connection for a jackscrew actuator. Thus, the references would not have been combined, absent hindsight.

Further, Applicants submit that the Examiner can point to no motivation or suggestion in the references to urge the combination as alleged by the Examiner. Indeed, the Examiner does not even support the combination by identifying a reason for combining the references.

The Examiner alleges that it would have been obvious to one with ordinary skill in the art at the time the invention was made "to provide a connection means between the slide pins and the cam members by using a bifurcated structure on the end on (sic) the slide pins to engage into an engagement hole in the cam member in order to connect the cam members to the slide pins, and to apply both torque and axial force to the slide pins."

In other words, the Examiner appears to allege that there are three separate motivations to modify the Rauchhaus reference based upon the Kussman et al. reference: 1) in order to connect the cam members to the slide pins; 2) to apply torque to the slide pins; and 3) to apply an axial force to the slide pins.

However, none of the Examiner's alleged motivations is applicable to the applied references.

Firstly, the Rauchhaus reference already discloses a connection between the cam members and the slide pins. Therefore, there can be no motivation to modify the Rauchhaus reference in order to provide that connection.

In particular, the Rauchhaus reference discloses a bolt 21 that connects the locking rods 10 and 11 to the cylinders 19 and 20 (col. 5, lines 5-11). Therefore, there is no reason or

motivation to modify the disclosure of the Rauchhaus reference "in order to connect the cam members to the slide pins" because the Rauchhaus reference already discloses such a connection.

Secondly, the Examiner alleges that it would have been obvious to modify the disclosure of the Rauchhaus reference "to apply torque to the slide pins." However, the slide pins 10 and 11 that are disclosed by the Rauchhaus reference do not operate based upon an application of torque. Nor is there any reason to apply a torque to the slide pins 10 and 11 that are disclosed by the Rauchhaus reference.

The Examiner appears to be very confused because the only reference to an application to a torque is with respect to the operation of the jackscrew 21 in order to convert the rotational/torque applied to the gear 59 to the linear motion of the jackscrew 21 that is only disclosed by the Kussman et al. reference. In other words, the Kussman et al reference discloses a linear actuator that converts a rotational motion into a linear motion and requires the application of a torque to overcome any force that is linearly applied to the jackscrew 21.

In stark contrast, the latch mechanism that is disclosed by the Rauchhaus reference does not operate in any manner like the linear actuator that is disclosed by the Kussman et al. reference. Indeed, the two devices that are disclosed by these two references rely upon completely different and unrelated principles of operation.

Therefore, contrary to the Examiner's allegation, one of ordinary skill in the art would not have been motivated to modify the latch mechanism that is disclosed by the Rauchhaus reference "to apply torque to the slide pins."

Thirdly, the latch mechanism that is disclosed by the Rauchhaus reference discloses a pivot handle 34 that includes pins 41 and 42 which each engage corresponding grooves 25 in

cylinders 19 and 20. The operation of these elements of the latch mechanism operate to apply an axial force to the locking rods 10 and 11.

Therefore, contrary to the Examiner's allegation, there is no motivation to modify the latch mechanism that is disclosed by the Rauchhaus reference in order to apply an axial force because the latch mechanism is already capable of applying an axial force.

Thus, clearly, one of ordinary skill in the art would not have been motivated to modify the latch mechanism disclosed by the Rauchhaus reference based upon the disclosure of a linear actuator by the Kussman et al. reference.

Even assuming arguendo that one of ordinary skill in the art would have been motivated to combine these references, the combination would not teach or suggest each and every element of the claimed invention.

None of the applied references teaches or suggests the features of the present invention including a lock that includes: 1) a pair of springs (claim 1); and 2) a pair of cams that each have a pair of engaging holes and a pair of slide pins that each have a bifurcated structure including elastic pieces that each have projections that each engage a corresponding one of the pair of engaging holes (claim 10). As explained above, these features are important for easily disengaging the slide pin from the cam, for example, by merely rotating them relative to each other. Thereby allowing the slide pin, cam member, etc., to be reused and maintenance is significantly improved.

With respect to independent claim 1, the Rauchhaus reference clearly only discloses a single spring 28 and the Kussman et al. reference does not remedy this deficiency, because the Kussman et al. reference does not teach or suggest any spring at all, let alone a pair of springs.

With respect to independent claim 10, the Examiner admits that the Rauchhaus reference "does not disclose the method to (sic) which the slide pins are connected to the cam members."

The Kussman et al. reference does not remedy the deficiencies of the Rauchhaus reference.

In stark contrast to the present invention, the Kussman et al. reference does not teach or suggest engagement holes at all, let alone a pair of engaging holes, or protrusions that detachably engage the engagement holes.

Rather, the Kussman et al. reference merely discloses a arms 43 and 44 that each include a projection having an engagement surface 49 and a ramped surface 50. These arms 43 and 44 extend through a bore 47 and the engagement surfaces 49 engage a second end surface 48 (Figs. 2 and 3 and col. 5, lines 44- 49).

Therefore, at most, the Kussman et al. reference merely discloses one engagement hole. A single engagement hole does not meet the claimed limitation of engagement holes or a pair of engaging holes.

Moreover, the Kussman et al. reference clearly explains that the protrusions do not engage any hole at all, rather, they merely engage a second end surface 48. (Col. 5, lines 43-48).

Clearly, the Kussman et al. reference does not teach or suggest protrusions detachably engaging with each of the engagement holes.

Lastly, regarding the means plus function recitations, the Examiner has failed to interpret the claims to read only on the structures or materials disclosed in the specification and "equivalents thereof." The Federal Circuit has made it clear that the Office is required to

interpret means plus function language in accordance with 35 U.S.C. § 112, sixth paragraph (see M.P.E.P. §2106; *In re Donaldson*, 16 F.3d 1189, 1193 (Fed. Cir. 1994) and *In re Alappat,* 33 F.3d 1526, 1540 (Fed. Cir. 1994)). Clearly, the Examiner has failed to interpret the claims to read only on the structures or materials disclosed by the present specification and "equivalents thereof."

Therefore, the Examiner is respectfully requested to withdraw the rejection of claims 1-9.

III. FORMAL MATTERS AND CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully submit that claims 1-20, all the claims presently pending in the Application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the Application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date: 1/19/05

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